

COTTONWOOD ISLAND

HABITAT REHABILITATION AND ENHANCEMENT PROJECT

Pool 21

**Upper Mississippi River Miles
328.5.0 - 331.0**

**Lewis County, Missouri
Rock Island District**



RESOURCE PROBLEM:

Historically, Cottonwood Chute provided deep water habitat, and numerous low swales on the island provided important wetland habitat. Siltation has greatly reduced the quantity and quality of these habitat areas. Sedimentation has been acute in the upper end of the chute and in timbered portions of the island fronting the main channel. Dissolved oxygen values have fallen to critical levels and fish species diversity has decreased in the shallowing portion of the chute.

PROJECT FEATURES:

- * Mechanically excavate lower 4,900 feet of Cottonwood Chute to a 9-foot depth with 4 deep holes 15 feet deep;
- * Plant mast-producing trees on dredged material, three Forest Management Areas, and an agricultural field;
- * Excavate 4 acres of potholes (5); and
- * Notch 6 wing dams 100 feet to the original river bottom at staggered locations.

PROJECT OUTPUTS:

Mechanically dredging Cottonwood Chute would provide overwintering habitat for fish in the dredged deep holes. Planting mast-producing trees such as pin oak, bur oak, swamp white oak, pecan, and sycamore would enhance habitat value

by introducing a mast-producing component into a forest dominated by silver maple and cottonwood. Excavating potholes would restore sloughs and depressions impacted by sedimentation and provide secluded habitat for migratory bird nesting and feeding. It is anticipated that flow will increase in the vicinity of the notched wing dams, deepening the pool behind the wing dams. The change in flow at one wing dam may also stimulate an in-stream meander to the next wing dam. A meander would create deeper areas, which would attract a diverse benthic community and fishery.

FINANCIAL DATA:

General design costs were \$590,000 and construction costs are estimated at \$1,088,000. Annual costs for operation, maintenance, and repair are estimated at \$6,000 and will be the responsibility of the non-Federal project sponsor, the Missouri Department of Conservation.

STATUS:

Project construction was completed in FY 00. The dedication ceremony was held in July 2000.